Ã a ? d / Absolute Maximum Ratings(T_a=25 ;)

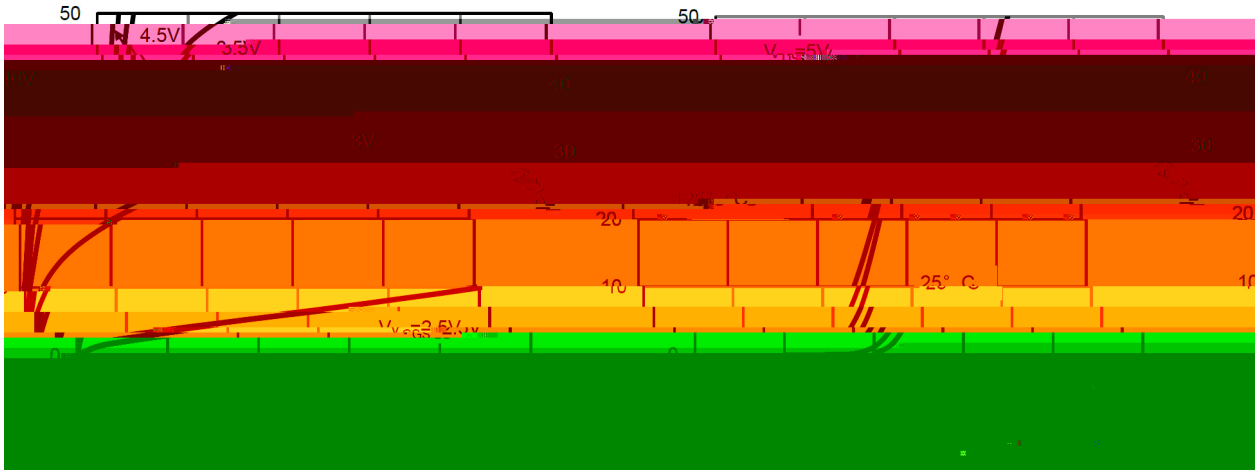
@ ƒ Parameter		… Z Symbol	ƒ › Rating	% y Unit
Drain-Source Voltage		V_{DSS}	40	V
Drain Current		I_D(Tc=25)	60	A
Drain Current - Pulsed		I_{DM}	120	A
Gate-Source Voltage		V_{GS}	±20	V
Single Pulsed Avalanche Energy		E_{AS}	78.5	mJ
Avalanche Current		I_{AS}	15	A
Power Dissipation		P_D(Tc=25)	37	W
Operating and Storage Temperature Range		T_J,T_{stg}	-55 to 150	
Thermal resistance, junction - ambient	t 0 10s	R ©JA	25	/ W
	Steady-State		55	
Thermal resistance, junction - case	Steady-State	R ©JC	3.4	

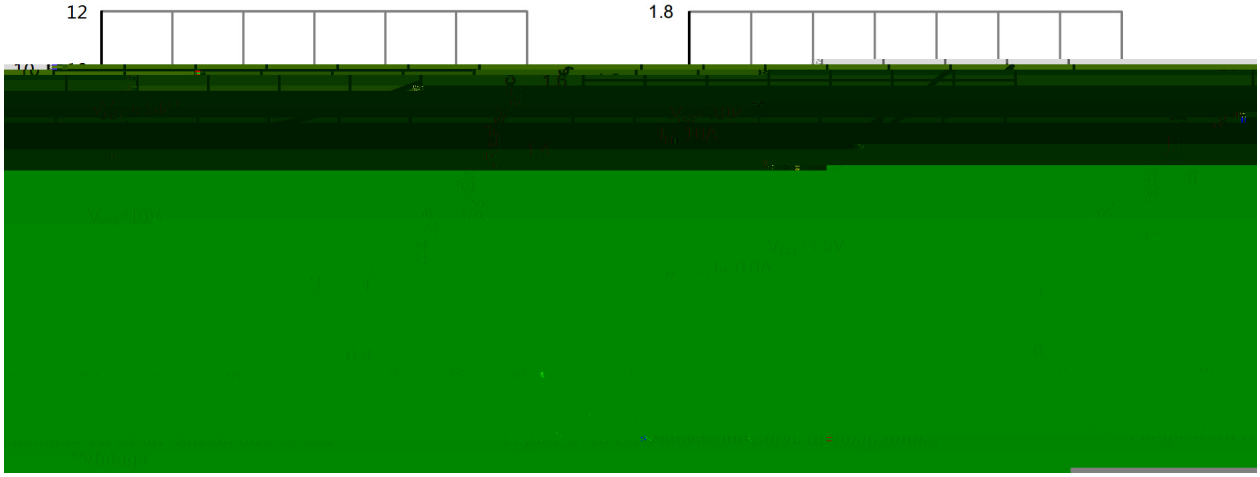
Ô4ì × ? d / Electrical Characteristics(Ta=25 ;)

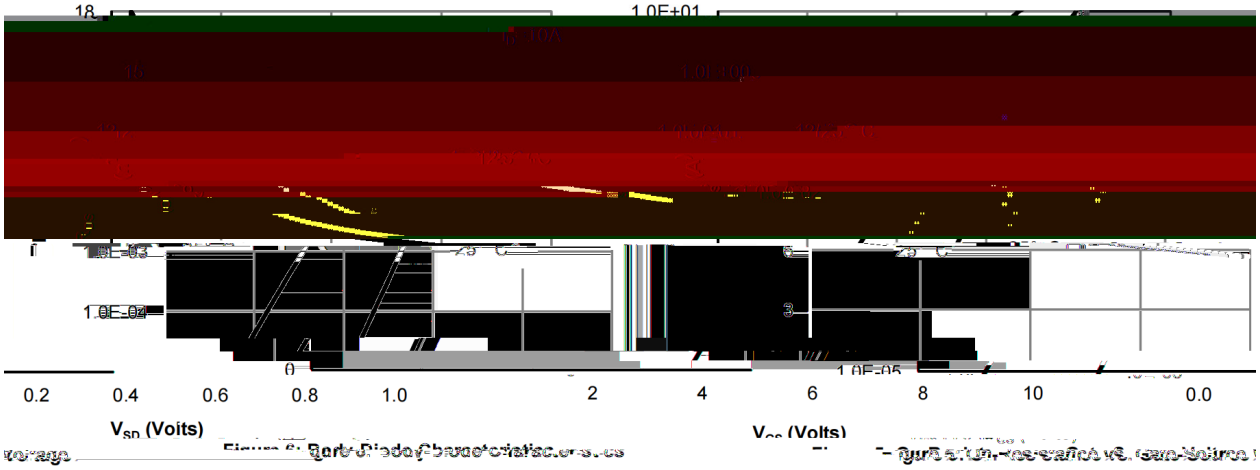
@ ƒ Parameter	… Z Symbol	y ¡ Ú ^ Test Conditions	Â 4 › Min	Á º › Typ	Â Ý › Max	% y Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V I_D=250 A	40	46		V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=40V V_{GS}=0V			1	A
Gate-Body Leakage Current Forward	I_{GSS}	V_{GS}=±20V V_{DS}=0V			±0.1	A
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=250 A	1.0	1.6	2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V I_D=20A		5.6	6	m
		V_{GS}=4.5V I_D=10A		7.8	9	m
Drain-Source Diode Forward Voltage	V_{SD}	V_{GS}=0V I_S=1A			1.2	V
Input Capacitance	C_{iss}	V_{DS}=25V V_{GS}=0V f=1.0MHz		990		pF
Output Capacitance	C_{oss}			390		
Reverse Transfer Capacitance	C_{rss}			42		
Gate resistance	R_g	V_{GS}=0V V_{DS}=0V f=1MHz		5.2		
Total Gate Charge	$Q_{g(10V)}$	V_{GS}=10V V_{DS}=20V I_D=20A		20		nC
Total Gate Charge	$Q_{g(4.5V)}$			8.4		
Gate Source Charge	Q_{gs}			5.5		
Gate Drain Charge	Q_{gd}			3.0		

@ *f* Parameter	… Z Symbol	y ¡ Ú ^ Test Conditions	Â 4 › Min	Á º › Typ	Â Ý › Max	% y Unit
Turn-On Delay Time	$t_{d(on)}$	V_{GS}=10V V_{DS}=20V R_L=1.0 R_{GEN}=3.0		7.5		ns
Turn-On Rise Time	t_r			2		
Turn-Off Delay Time	$t_{d(off)}$			23.5		
Turn-Off Fall Time	t_f			3.2		
Reverse Recovery Time	t_{rr}	I_F =10A, dI_F/dt=200A/uS		17		ns

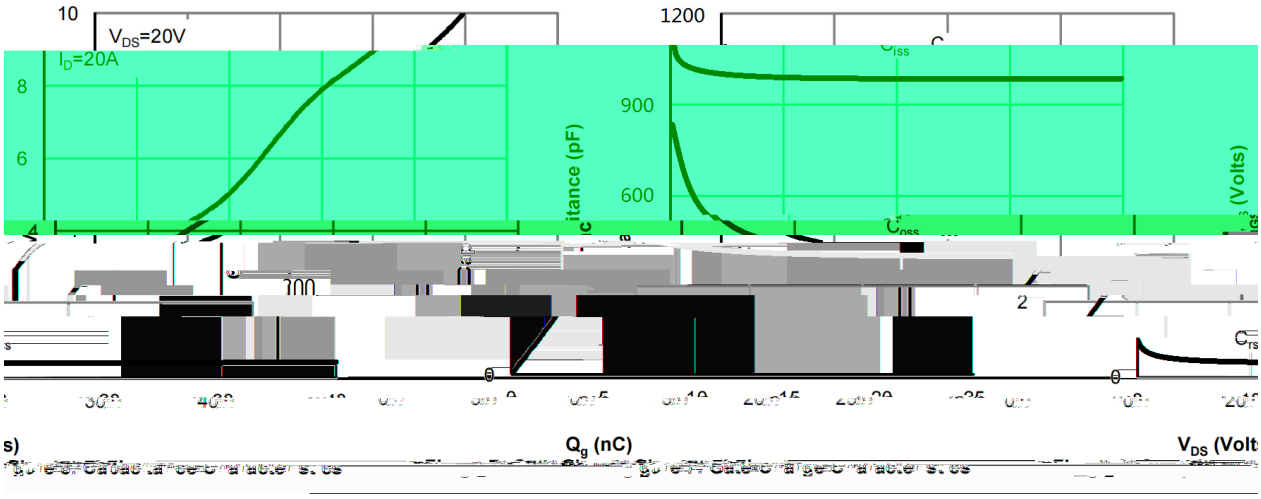
Ô ? d • Ž ¢ / Electrical Characteristic Curve

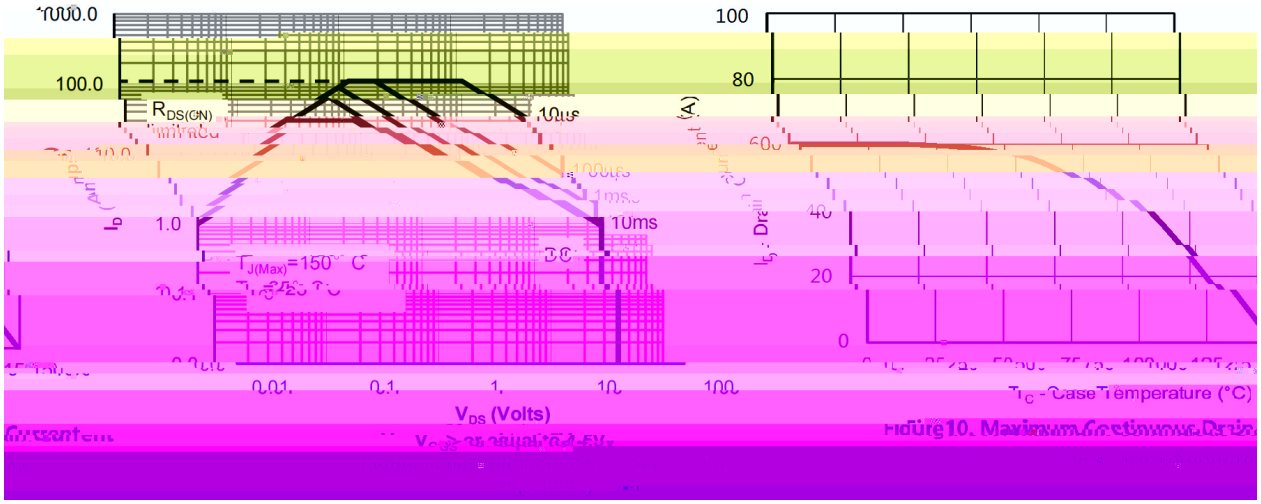


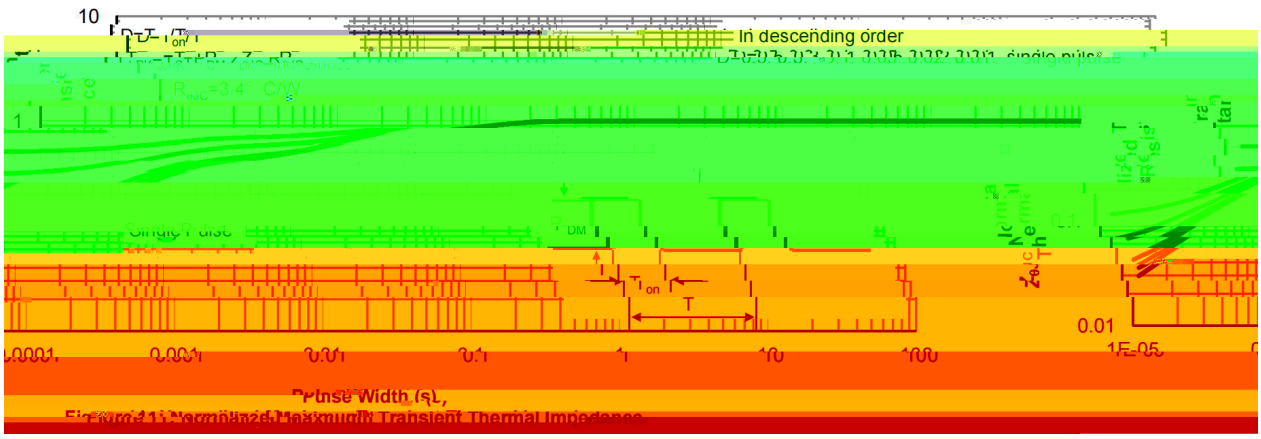




Ô ? d • Ž ¢ / Electrical Characteristic Curve







Ø ¤ =) ¢ / Package Dimensions

, M y ƒ / Marking Instructions

ª ¢ y

(8 y ¸ [W A

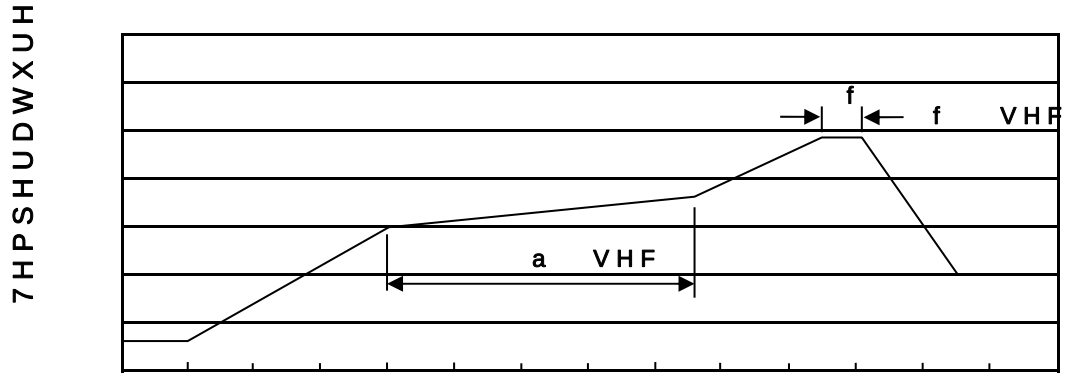
060N04S y º Z W A

y ÿ D Z W A k š ÿ D Z J

Note y

BR y	Company Code
060N04S y	Product Type Code
****:	Lot No. Code, code change with Lot No

š WD t … • Ž ¢ (x /) / : K S V K X G Z [X K 6 X U L O R K L U X / 8 8 K L R U] 9 U R J K X O T M 6



7 L P H V H F

ª ¢ y

Note:

1o• Ä ½ “ † 150 ½180 - k ž • 60 ½90sec;

1.Preheating:150~180 - , Time:60~90sec.

2o• Q › “ † 245 r5 - k ž • 4 Ò 5 r0.5sec;

2.Peak Temp.:245 r5 - , Duration:5 r0.5sec.

3o•D N ò i Ò 0 , † 2 ½10 - /sec.

3. Cooling Speed: 2~10 - /sec.

ÂD /Cã p ¯ »] / Resistance to Soldering Heat Test Conditions

“ † y 260 r5 - ž • y 10 r1 sec. Temp.:260±5 Time:10±1 sec

G P á / Packaging SPEC.

2 & x / REEL

Package Type / x ¥ ”	Units ;>û ¦H					Dimension ;>û p . (unit Æmm³)		
	Units/Reel Q 2 &	Reels/Inner Box 2 & "	Units/Inner Box Q "	Inner Boxes/Outer Box " ”	Units/Outer Box Q ”	Reel	Inner Box	Outer Box
PDFN5×6	5,000	2	10,000	6	60,000	13”×12	360×360×50	380×335×366

„ Ð y ƒ / Notices